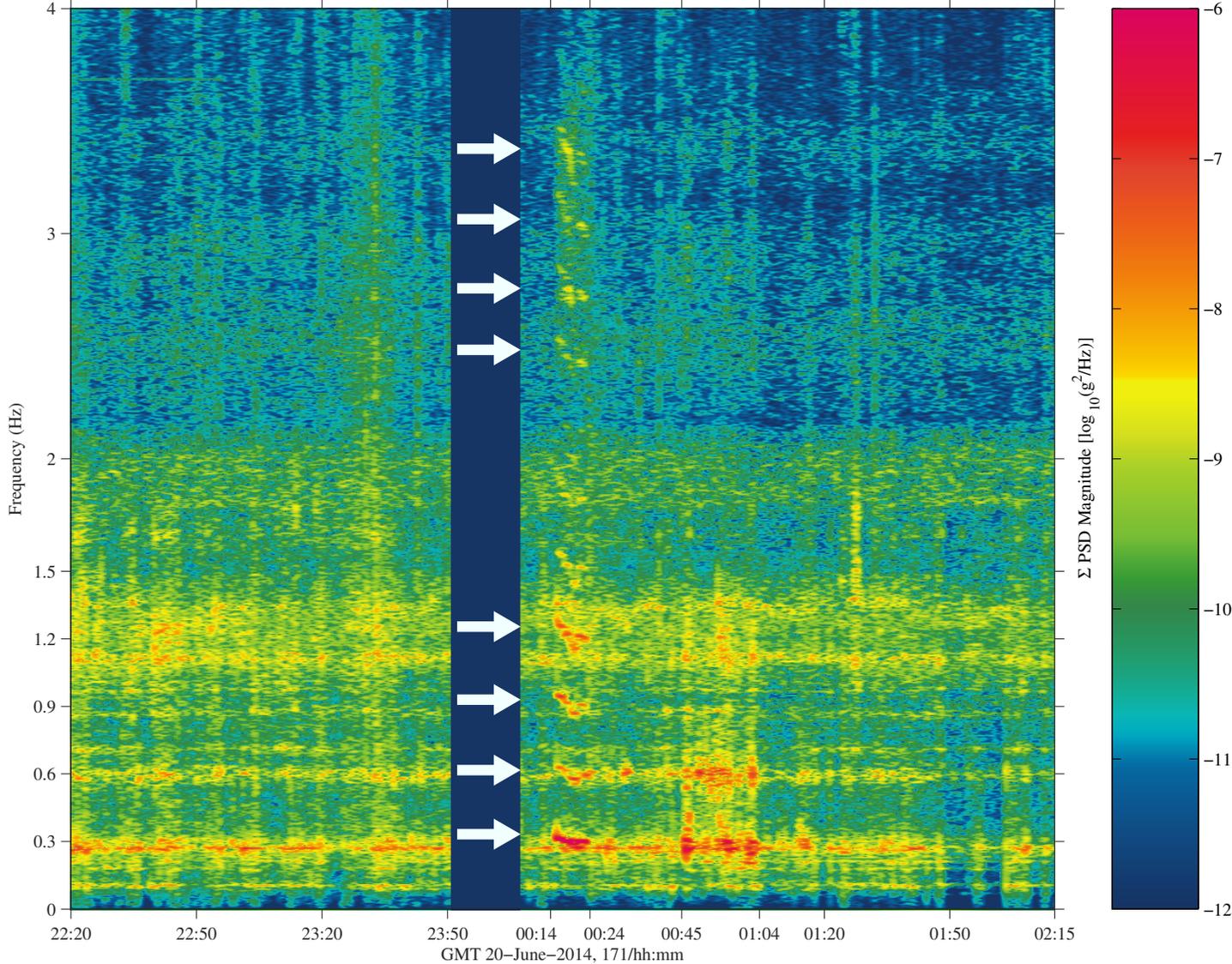


sams2, 121f05006 at JPM1F5, ER4, Drawer 2:[466.80 -292.06 214.58]
 142.0000 sa/sec (6.00 Hz)
 $\Delta f = 0.004$ Hz, Nfft = 32768
 Temp. Res. = 19.493 sec, No = 30000

SAMS2, 121f05006, JPM1F5, ER4, Drawer 2, 6.0 Hz (142.0 s/sec)

Start GMT 20-June-2014, 171/22:20:00.005



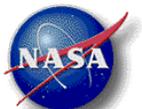
Unusual Rate Signature Quality

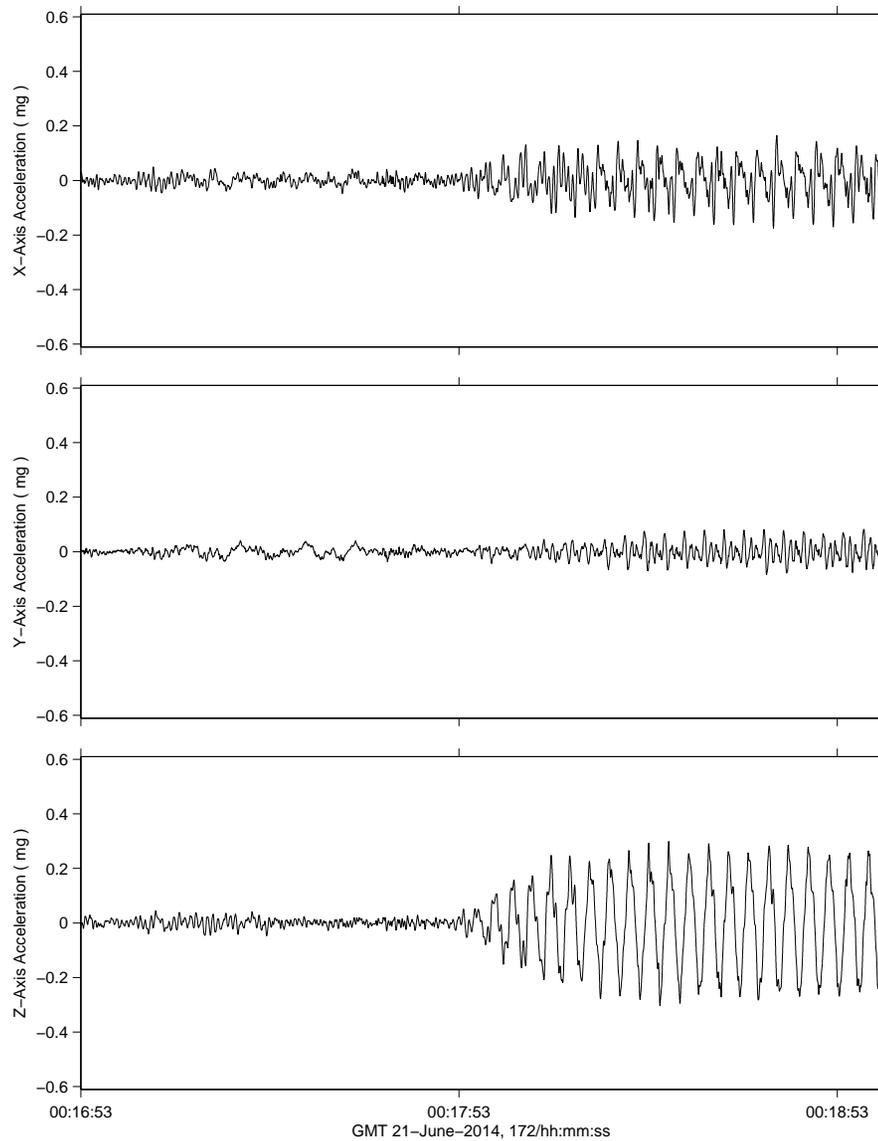
Description	
Sensor	SAMS 121f05006 142.00 sa/sec, 6.00 Hz
Location	JPM1F5, ER4, Drawer 2
Plot Type	Spectrogram

Notes:

- On GMT 24-June-2014, a request from the MER was made to let them know if any payload activity was known to correspond to GN&C note of unusual rate signature at around 0.3 Hz starting at around GMT 21-June-2014, 172/00:18 – 00:25.
- SAMS sensors in all 3 labs detected this disturbance signature, however, the SAMS sensor in the JEM registered the largest disturbance.
- The color spectrogram shows acceleration spectra over time roughly centered time-wise on this unusual rate signature.
- The white arrows point to the fundamental frequency at about 0.3 Hz along with several weaker harmonic components up to between 3 and 4 Hz.

Regime:	Vibratory
Category:	Crew
Source:	Unusual Rate Signature





Unusual Rate Signature Quality

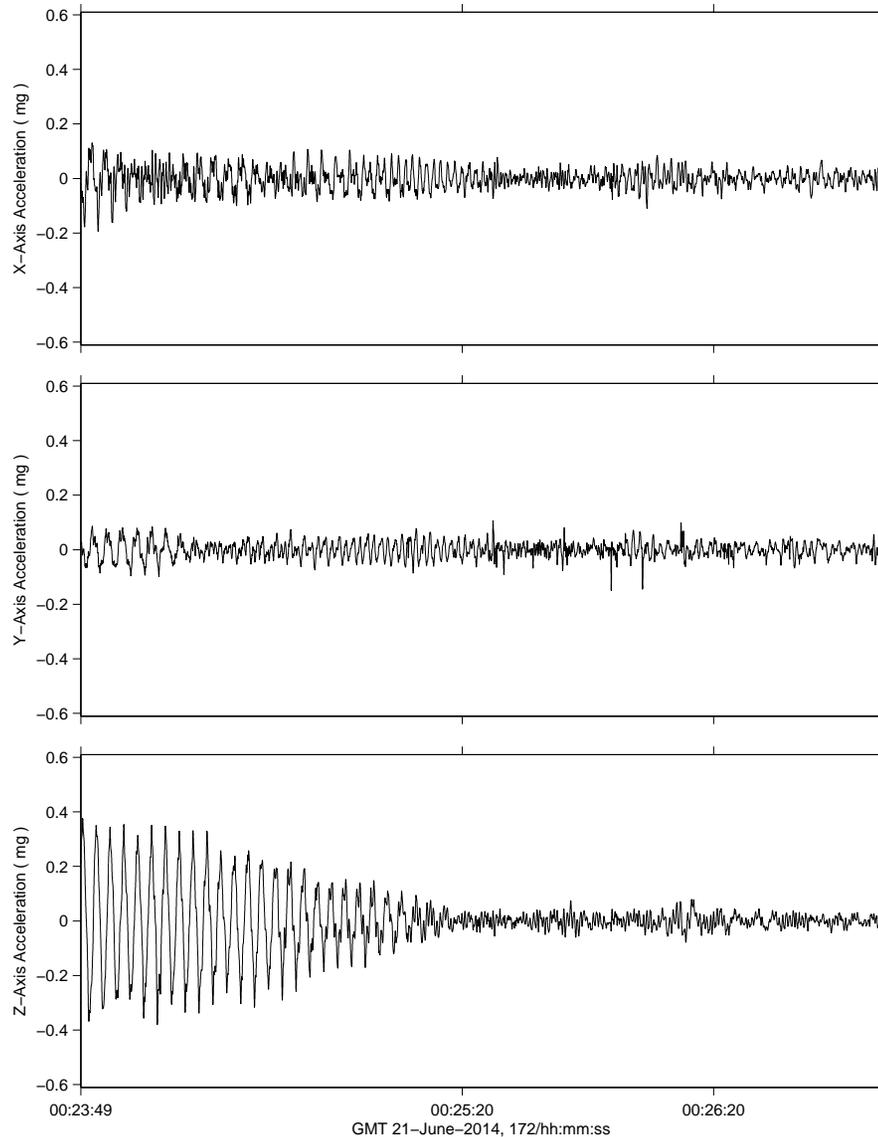
Description	
Sensor	SAMS 121f05006 142.00 sa/sec, 6.00 Hz
Location	JPM1F5, ER4, Drawer 2
Plot Type	Acceleration vs. Time

Notes:

- This 3-panel plot shows the start-up of this unusual rate signature just after GMT 21-June-2014,172/00:17:53.
- We see that this disturbance was primarily aligned with the Z-axis in the JEM, and it had some X-axis contribution to a lesser extent.

Regime:	Vibratory
Category:	Crew
Source:	Unusual Rate Signature





Unusual Rate Signature Quality

Description	
Sensor	SAMS 121f05006 142.00 sa/sec, 6.00 Hz
Location	JPM1F5, ER4, Drawer 2
Plot Type	Acceleration vs. Time

Notes:

- This 3-panel plot shows the tailing off of this unusual rate signature at around GMT 21-June-2014,172/00:25:20.
- We see again that this disturbance was primarily aligned with the Z-axis in the JEM, and it had some X-axis contribution to a lesser extent.
- Near the end of this disturbance, we see a distinct contribution on the Y-axis too.

Regime:	Vibratory
Category:	Crew
Source:	Unusual Rate Signature

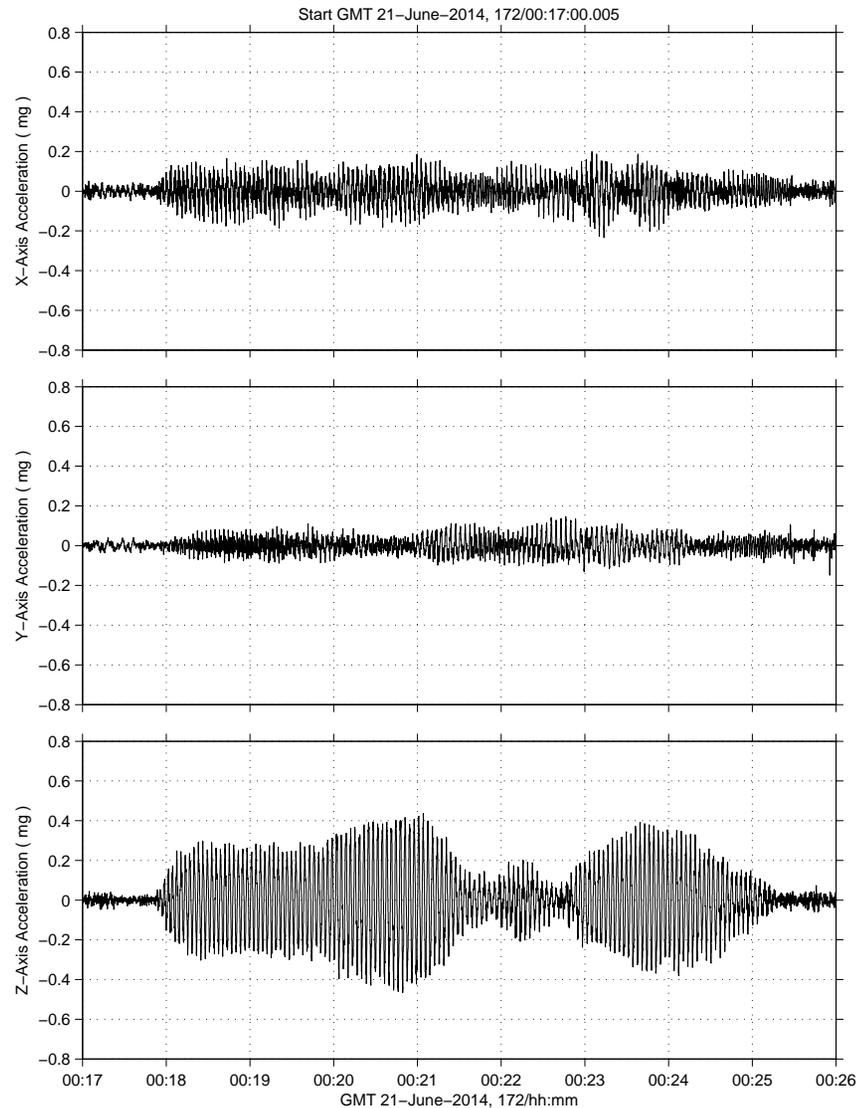


Unusual Rate Signature Quantify

sams2, 121f05006 at JPM1F5, ER4, Drawer 2:[466.80 -292.06 214.58]
142.0000 sa/sec (6.00 Hz)

SAMS2, 121f05006, JPM1F5, ER4, Drawer 2, 6.0 Hz (142.0 s/sec)

SSAnalysis[0.0 0.0 0.0]



Description

Sensor	SAMS 121f05006 142.00 sa/sec, 6.00 Hz
Location	JPM1F5, ER4, Drawer 2
Plot Type	Acceleration vs. Time

Notes:

- This 3-panel plot shows the entirety of the unusual rate signature between about GMT 21-June-2014,172/00:18 and 00:25.
- The peak-to-peak Z-axis excursions during the span of this disturbance was approximately 0.91 mg.
- Not shown here, but the max vector magnitude during the span of this disturbance was 0.48 mg.

Regime:	Vibratory
Category:	Crew
Source:	Unusual Rate Signature



Unusual Rate Signature Ancillary Notes

The image below shows a fisheye photo of the **Advanced Resistive Exercise Device (ARED)** in the Node 3 module of the space station. It is suspected that this device may have been in use during the unusual rate signature or possibly other movement in the Russian Service Module.

